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ABSTRACT

Attribution theory suggests that attributional styles may contribute to the motivational and performance deficits frequently observed in depressed and lonely populations. An Attributional Style Assessment Test (ASAT) was created and administered to college students, along with the Beck Depression Inventory and the UCLA Loneliness Scale. Correlational analyses revealed distinct attributional style differences between the more lonely and less lonely people, especially when attributions were assessed for interpersonal failure situations. The more lonely people attributed these failures more than less lonely people to their unchangeable character defects (abilities and personality traits), and less to their changeable behavioral mistakes (effort and strategy selection). Parallel results were obtained when depression was used as the criterion variable. A second study using a modified version of the ASAT with other college students replicated these findings. Results appear to support the theory linking attributional style to motivational and performance deficits in lonely and depressed populations. (Author/NRB)

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Attributional Style of the Lonely and the Depressed

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Attributional Style of the Lonely and the Depressed

A person's motivation at a task often depends to a great extent upon personal success expectancies -- how well the person expects to do at the task. For instance, people who expect to do well at an interpersonal persuasion task would be more likely to volunteer to make persuasive telephone appeals for a worthy cause, such as the Red Cross. They would also try harder to be persuasive and persist longer at making calls. As a consequence of this higher motivation, these people would probably be more successful as well.

Often, people with objectively similar abilities and past histories of success and failure have very different expectancies. Different people seem to perceive their successes and failures quite differently. Some may, for instance, attribute initial failures at a telephone persuasion task to their lack of ability. This attribution would imply more future failures for the person, leading to lowered success expectancies, lowered motivation, and poorer performance. Others may attribute their initial failures to use of the wrong persuasive strategy. This attribution implies that improvement is possible in future calls, and thus maintains high success expectancies, motivation, and performance.

Much research has examined the general relationship between a person's attributional style, expectancies, level of motivation, and performance. Research on achievement motivation, for instance, has shown that people low in achievement motivation tend to attribute their failures to a lack of ability, while people high in achievement motivation tend to attribute their failures to a lack of effort.

Researchers in the achievement domain have also shown that experimental manipulation of attributions produces corresponding changes in motivation and performance. (See Weiner, 1972, 1974, 1979 for reviews of much of this literature.)

More recently, a number of theorists have applied attributional models from the achievement motivation literature to the clinical problems of depression (c.f. Abramson, Seligman, & Teasdale, 1978; Weiner, 1979; Weiner & Litman-Adize, 1978) and loneliness (Peplau, Russell, & Heim, 1979). The basic premise of this work has been that a person suffering from such symptoms consistently explains events in a self-defeating fashion, and this attributional style lowers the person's success expectancies, motivation, and performance, thus, sustaining the symptom. One goal of these studies has been to understand this process in order to identify potentially useful clinical interventions. If this premise is valid, then certain implications should follow. First, different levels of loneliness and depression should be associated with differences in attributional style. Second, changing a person's attributional style should produce corresponding changes in success expectancies, motivation, and performance.

The present studies were designed to address the first question -- the existence of different attributional styles as a function of level of depression and loneliness. The second question -- concerning the experimental manipulation of these attributional styles -- is addressed by Anderson (Note 1). Before describing the present studies, a brief review of past research on the attributional styles of depressed and lonely groups is in order.

There have been no published empirical reports on the relationship of attribution style to loneliness. However, Peplau, Russell, and Heim (1979) have proposed that lonely people will make more internal and stable attributions for failure, and more external and unstable attributions for success than non-lonely people.

The attributional basis of depression has been investigated more thoroughly, particularly by researchers interested in the "learned helplessness" explanation of depression (Seligman, 1975; Hiroto, 1974; Klein, Fencil-Morse, & Seligman, 1976; Miller & Seligman, 1975). Seligman, Abramson, Semmel, & Von Baeyer (1979) created an attributional style questionnaire consisting of 12 situations. Subjects were to imagine themselves in different situations, write down the one major cause of the outcome, and to rate that cause on internality, stability, globalility, and importance. Using only items that were rated as important to the subject, a score on each of the three dimensions was derived; these scores were then correlated with depression as measured by the Beck Depression Inventory. For bad outcomes (failures), depressed subjects reported causes that they rated as more internal, stable, and global than non-depressed subjects; for good outcomes (successes), depressed subjects' attributions were more external and unstable but not more specific than those of non-depressed subjects.

Other investigators have also examined the attributional style of depressed people. Kuiper (1978) measured attributions for success or failure on a word-association task. Depressed subjects made more internal attributions (ability and effort) for failures than did non-depressed subjects, but there were no differences along the stability

dimension. In a study by Rizley (1978), subjects engaged in a number guessing task, and rated the importance of 4 attributional factors -- ability, task difficulty, effort, and luck -- in producing their outcome. Depressed subjects rated internal causes (effort and ability) to be more important determinants of failure but less important determinants of success. There were no differences, though, in ratings of external causes (luck and task difficulty), stable causes (ability and task difficulty) and unstable causes (luck and effort).

In another study (Janoff-Bulman, 1979), depressed and nondepressed subjects imagined themselves in each of four scenarios containing negative outcomes (e.g., a car accident, a social rejection) and rated how much of the blame was due to the "kind of person you are" (characterological blame), to "what you did" (behavioral blame), to chance, to other people, and to the environment. Depressed subjects rated the charaterological blame higher than did nondepressed subjects.

Finally, Klein, Fencil-Morse, & Seligman (1976) reported a study in which depressed and nondepressed subjects rated the extent to which their outcome on an anagram task was due to ability and task difficulty. On an "internality" index (difference between ratings of ability and task difficulty), the depressed subjects attributed failure more to internal factors than did nondepressed subjects. There were no dignificant differences in the success condition.

Overall, these studies do provide evidence of the existence of a "depressive" attributional style that theoretically could lead to

the motivational and performance deficits frequently observed in clinical populations. There are, however, several methodological issues that need clarification. Most of the studies have offered subjects attributional alternatives that are based on a dimensional model of attributions for achievement situations. These alternatives were not originally intended to explain clinical phenomena and may not span the domain of people's natural explanations for interpersonal outcomes; they may not even be expressed in the attributional language of most people. That is, the dimensions of internality, stability, controllability and globality may be useful from a theoretical point of view, but before we can create appropriate clinical interventions, we need to understand the most common ways that people express their attributions, in everyday life. By imposing a theoretical structure on subjects in the initial stages of a research problem, the theoretician risks missing other critical attributional factors (cf. Falbo & Beck, 1979).

In addition, the theoretical dimensions of attributions are generally portrayed as orthogonal to each other, yet in practice the most commonly used explanations may show a correlation between underlying dimensions. If the underlying dimensions are not independent of each other, there may be no theoretical advantage to using these labels instead of the subjects' original atributional vocabulary.

Finally, most previous studies have focused on attributions for non-interpersonal (usually cognitive) tasks such as solving anagrams and arithmetic problems. (The Seligman et al., 1979, study was an

exception to this trend.) When we try to generalize to clinical situations, however, interpersonal tasks -- like getting along with people, forming and maintaining friendships, being assertive with others -- become especially important. Symptoms like depression and loneliness are, to a large extent, reducible to interpersonal processes (Horowitz & French, 1979; Horowitz, French & Anderson, 1981; Horowitz, French, Lapid, and Weckler, 1981), thus emphasizing the need to examine attributional processes in an interpersonal context. (For more detailed critiques of research in this area, see Anderson & Jennings, 1980; Falbo & Beck, 1979; Wortman & Dintzer, 1978.)

For these reasons we decided to re-examine depressed and lonely people's attributional style using categories that were developed empirically. These categories were formed from the spontaneous attributions of a large sample of subjects. We identified the attributions that occurred naturalistically for a standard set of situations and classified them into 6 categories, without regard to hypothetical underlying dimensions. In that way, we did not impose on the subject dimensions that may not be orthogonal, nor categories that may be stylistically unnatural, nor alternatives that may overlook particular attributions that subjects normally make. Furthermore, we compared situations that are interpersonal with situations that are not interpersonal.

Experiment 1

Method

The Attributional Style Assessment Test. Twenty-two items written that described situations familiar to students. Half

were interpersonal, the other half were noninterpersonal, and each could be paired with an outcome describing either a success or a failure. An example of an interpersonal success is: "You have just attended a party for new students and have made some new friends." An example of a noninterpersonal failure is: "You have just failed the midterm test in a class."

Twelve situations were selected at random and presented to a group of 30 pretest subjects; 6 items were presented as successes, 6 as failures. The subjects' task was to imagine themselves in each situation, and to write out the most likely cause for that outcome. Then these open-ended responses were examined independently by three psychologists who identified meaningful categories that included all the reported attributions.

Six categories resulted: (1) the strategy attribution explained the outcome in terms of the person's particular approach, tactic, or method; (2) the ability attribution explained the outcome in terms of the person's competence (or lack of competence); (3) the effort attribution explained the outcome in terms of how hard the person had tried; (4) the personality trait attribution explained the outcome in terms of some pervasive characteristic of the person other than ability; (5) the mood attribution explained the outcome in terms of a transitory mood state; (6) the external circumstances attribution explained the outcome in terms of any remaining external circumstances beyond the person's control.

Ten psychology graduate students, who were unfamiliar with the purpose of the study, were asked to classify the original free

responses into the six categories. A category labeled "none of the above" was added for causes that did not seem to fit the six attributional categories. Less than 2% of the categorizations fell into this category, and they were mainly due to responses that were irrelevant to the situation. The six attributional categories were therefore broad enough to include most of the original free-response attributions of the original free-response attributions. It is interesting to note that the situations of the present study did not seem to elicit luck and task difficulty as common attributions (cf. Weiner, 1972). Furthermore, two different attributions, the ability and trait attributions could both be described as stable and internal; they both emphasize relatively enduring, unchangeable characteristics of the person. Two further attributions, the effort and strategy attributions, could both be described as unstable and internal; they both emphasize changeable, situationally-specific variations in behavior. The distinction between these two types of attributions has also been noted by Janoff-Bulman (1979).

Our prediction of the relationship between attributional style and loneliness and depression can now be further specified. The relatively low success expectancies, motivation and performance of lonely and depressed people is seen as a result of an attributional style that most likely consists of making more characterological (Ability and Trait) and fewer behavioral (Strategy and Effort) attributions for their failures than non-lonely and non-depressed people.

The next step was to insure that the situations were clearly interpersonal or clearly noninterpersonal. All 22 situations

were presented to 20 new subjects who rated each situation on a 9 point scale anchored at "not at all interpersonal" (1) and"very interpersonal" (9). The mean ratings of the noninterpersonal situations ranged from 1.70 to 4.15, while the mean ratings of interpersonal situations ranged from 6.20 to 8.05. Each of the interpersonal situations was rated significantly more interpersonal than each of the noninterpersonal situations; all $ts(19)$ 4.70, ps .001. We selected 5 interpersonal and 5 noninterpersonal situations from this pool to include in the questionnaire. Each situation was expressed both as a success and as a failure, yielding a total of 20 items -- 5 interpersonal successes, 5 interpersonal failures, 5 noninterpersonal successes and 5 noninterpersonal failures. Along with each item, we provided the six alternative reasons (or attributions) to explain the outcome. Here is an example of an interpersonal failure item:

"You have just attended a party for new students and failed to make any new friends."

a. I used the wrong strategy to meet people.

b. I am not good at meeting people at parties.

c. I did not try very hard to meet new people.

d. I do not have the personality traits necessary for meeting new people.

e. I was not in the right mood for meeting new people.

f. Other circumstances (people, situations, etc.) produced this outcome.

Subjects responding to the questionnaire were asked to imagine themselves in each situation and to consider each possible reason

that might explain why the situation had turned out as it did. Subjects were asked to circle the one reason that best explained the outcome, in a forced choice format.[1] The final version of the Attributional Style Assessment Test can be obtained by writing to the senior author.

Procedure. The Attributional Style Assessment Test (ASAT), the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978) and the Beck Depression Inventory (Beck, 1967) were included in a questionnaire packet given to approximately 600 introductory psychology students at Stanford University. About 400 packets were returned, and some of these were incomplete. Of these, 298 people correctly completed both the ASAT and the Loneliness Scale; 304 people correctly completed both the ASAT and the Beck Depresseion Inventory.[2]

Results and Discussion

Each subject's responses were scored to show the relative frequency of each type of attribution for each of the four types of situations. The results are shown in Table 1. It is interesting to note that effort was the single most common attribution. Also, the trait attribution was chosen rather infrequently.

Then, for each type of situation, the number of times a person chose a given attributional category was correlated with his or her score on the loneliness scale. These correlations are reported in Table 2. Because of the large number of correlation coefficients, we adopted a stringent criterion of significance, $\alpha = .01$. Table 2 shows that the loneliness scores correlated significantly with

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Insert Table 1 and Table 2 about here

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the number of ability attributions for failure situations, particularly for interpersonal failures. Similarly, for interpersonal failures the relative frequency of trait attributions correlated significantly with the loneliness scores. Thus, the predicted attributional style of lonely people emerged for situations describing interpersonal failures. Lonely people more often attributed interpersonal failures to unchangeable personal characteristics -- a lack of ability or an inadequacy in some personality trait. Conversely, less lonely people more often attributed interpersonal failures to having used the wrong strategy or having exerted insufficient effort -- short term behavioral causes that a subject could choose to modify on future occasions. The pattern was similar for noninterpersonal failures but uniformly lower. These results are consistent with the conception of loneliness as primarily an interpersonal problem.

Correlations for successful outcomes were not particularly noteworthy, except for the correlations involving the frequency of the attribution "other circumstances." People with higher loneliness scores more often used this rather vague attribution. Apparently, for lonely people, successes are explained by vague factors that are not under the subject's control.

The correlations between the frequency of an attribution and the scores of depression showed a similar pattern, as reported

in Table 3. Again, the attributional style correlated with the of depression primarily for situations describing interpersonal

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Insert Table 3 about here

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failures. Highly depressed subjects ascribed their interpersonal failures to a lack of ability and to an inadequacy in some personality trait -- again, both unchangeable personal characteristics. Less depressed people tended to attribute interpersonal failures to having used the wrong strategy or exerting insufficient effort -- both being changeable, behavioral mistakes. Also, as with the loneliness variable, the degree of depression correlated significantly with the use of the vague "other circumstances" as an explanation for interpersonal successes.

It thus seems that lonely and nonlonely people (as well as depressed and nondepressed people) differ in their attributional style with respect to <u>interpersonal failures</u>. The finding that the relationships are weaker for noninterpersonal situations (or not present at all for successes) may help explain some inconsistencies in the studies reviewed earlier. These inconsistencies, for the most part, resulted from assessing attributions for noninterpersonal tasks or for successful outcomes. The present results suggest that interpersonal failure is the most discriminating type of situation.

<u>Composite measure</u>. As we hypothesized previously, several attributional categories have direct implications for predicting a person's motivational and performance levels. For example, suppose

a person attributes a failure to relatively stable (unchangeable) personal defects (like a lack of ability). The person would then have no reason to try harder on future occasions or to experiment with other strategies. Stable, or permanent, defects of this type could not be changed, so a person who selects such attributions would be more apt to give up hope, resulting in lowered expectancies, lowered motivation, and poorer performance. Thus, people who select ability and trait attributions to explain failures should show an impairment in motivation and performance, while those who select the effort and strategy attributions should show higher levels of motivation and performance.

We therefore devised a single measure that would describe a subject's tendency to ascribe failures to effort and strategy, rather than to ability and trait. For each subject we calculated a score based on the number of strategy plus effort attributions minus the number of ability plus trait attributions. This index can be taken as a measure of the subject's perception of the "apparent changeability" of once-failed situations; it is called the "changeability index."

This index was calculated separately for each of the four types of situations on the ASAT. For situations of interpersonal failure, the correlation between the changeability index and loneliness was -.440 ($p < .001$); that between the changeability index and depression was -.350 ($p < .001$). For noninterpersonal failures, the correlations were -.201 for loneliness and -.202 for depression; both $ps < .001$. The corresponding correlations for success situations were uniformly weaker and generally non-significant.

Thus, the data suggest that there is a negative attributional style associated with the problems of loneliness and depression. This style primarily operates with respect to interpersonal failures, which the more lonely and depressed subjects attribute to a lack of ability or to a personality defect. Situations describing successes did not yield any systematic attributional style, although there was a tendency for lonely and depressed people to credit their successes to the vague attribution "Other circumstances." These results suggest that studies of lonely and depressed people should examine interpersonal tasks and settings, rather than noninterpersonal ones like those involving anagrams or arithmetic problems. (See Anderson & Jennings, 1980, and Jennings, Note 2, for a discussion of other problems in using simple, noninterpersonal tasks in the study of attributions and motivation.)

To further extend and validate the findings of this study, a conceptual replication was conducted.

Experiment 2

According to the results of Experiment 1, depressed people and lonely people mainly ascribe interpersonal failures to factors that we have called ability, trait, effort, and strategy attributions. Furthermore, as Table 1 showed, trait attributions were relatively uncommon, so the critical list of attributions can be reduced to three. The Attributional Style Assessment Test was therefore simplified by offering only three attributional alternatives for each situation. In Experiment 2, we demonstrated that this simplification does not alter the relationship reported above.

Method

The ASAT was modified in two ways. First, we added enough new items to produce nine items for each type of situation (interpersonal success, interpersonal failure, noninterpersonal success, noninterpersonal failure). Second, only three attributional choices were offered for each situation, namely, those for ability, effort, and strategy alternatives.

The ASAT was administered, along with the UCLA Loneliness Scale and the Beck Depression Inventory, to approximately 200 students in an introductory psychology class at Stanford University. Of the students who returned the ASAT, 121 completed the Beck Depression Inventory and 117 also completed the UCLA Loneliness Scale.

Results

For each subject we computed the relative frequency of each type of attributional choice for each type of situation. The resulting correlations between the relative frequency of each attributional choice, on the one hand, and the scores of loneliness and depression on the other are shown in Table 4. The results in

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Insert Table 4 about here

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Table 4 are very similar to those of experiment 1. For situations describing interpersonal failure, the attributional style was related to the subject's degree of loneliness or depression. That is, lonely people and depressed people made significantly more ability attributions to account for their interpersonal failures.

The shortened list of attributional alternatives did not alter the pattern of correlations observed in Experiment 1.[3]

Discussion

An attributional explanation of depression and loneliness contains at least two distinct hypotheses. One is that depressed and lonely people differ in the nature of their attributional style, ascribing interpersonal failures to permanent defects in themselves. Such a self-conception is implied in discussions of helplessness (Abramson et al., 1978), pessimism (Beck, 1967), and lowered self-efficacy (Bandura, 1977). The present study has supported this hypothesis. The results showed that depressed and lonely people ascribe interpersonal failures to relatively permanent (stable) defects in themselves, such as a failure in their ability. Since the trait attribution occurred rather infrequently, a lack of ability was the major attribution used by depressed and lonely people to explain their failures.

An attributional explanation of depression also implies that people who ascribe interpersonal failures to a lack of ability suffer from a lower level of motivation, hence, a lower level of performance. This hypothesis implies that attributions can be altered experimentally so as to raise a depressed person's level of motivation and performance. It may be possible, for example, to persuade depressed subjects that they can successfully exert more effort or adopt better strategies to overcome prior interpersonal failures. Anderson (Note 1) has reported one successful test of this hypothesis, and other experiments are planned.

A question that merits additional consideration concerns why the characteristic attributional style of depressed and lonely people mainly occurred for interpersonal situations. It is possible, for example, that depressed and lonely people do exhibit genuine skills deficits in interpersonal situations. Gotlib and Asarnow (1979) examined the ability of depressed and nondepressed people on two tasks, an impersonal task and an interpersonal task. Their study showed impaired performance on the interpersonal task but not on the impersonal one. However, it is still not clear whether the depressed subjects' impairment reflects a genuine skill deficit or a motivational one. A purely motivational deficit could probably be altered through persuasive communications, while a skill deficit would require remedial training. Such issues will be explored in future research.

Finally, we would like to comment on a broader methodological issue. In the present studies we have shunned the use of predetermined attributional factors, categories, or dimensions, and formalized scales or measures of attributional style. It is our position that researchers need to determine exactly which attributions are relevant to their subject population for the particular type of situation under investigation. These "naive attributions" are likely to be different in different situations and in different populations. Once pretesting has shown which attributions are frequently and spontaneously made, the investigator can then adapt his or her theoretical system to the subjects' perceptions of the domain. Imposing one's theories from the outset, though, will

often lead to confirmation of a theory that is, at best only partially correct; at the same time, reliance on one's prior theories reduces the opportunity to make new discoveries.

More to the point, although we developed two versions of the ASAT in the present studies, we do not claim that the attributional factors we discovered are the "best." They were, however, the most appropriate for our population of subjects and situations. Hopefully, others will find this approach to the study of attributions to be a useful one.

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Footnotes

1. In addition, subjects were asked to rate each reason to show how much, in their experience, it would have contributed toward the outcome if it had happened to them. The ratings were based on a 7-point rating scale, with "1" indicating that the reason contibuted little to the outcome, "7" indicating that the reason contributed much to the outcome. Results from the analyses of these importance ratings were very similar to those reported for the forced choice data, and lead to the same conclusions. Since the forced choice format yields very similar results, and is a more useful methodological tool (it is easier for the subject to complete, and is more easily scored only the data from this forced choice format are reported.
2. The overall correlation between UCLA Loneliness Scale scores and Beck Depression Inventory scores, as expected, was fairly strong, $r = .588$, $p < .001$, $n = 297$.
3. In a paper on the effects of strategy attributions on success expectancies following initial failure, Anderson & Jennings (1980) alluded to a study by Anderson, French, and Horowitz showing no significant correlation between effort attributions and loneliness, depression, and shyness. Those results were obtained in the first study of this series, but did not replicate in the two present experiments. We suspect that the failure to find differences in effort attributions in that initial study was due to sampling error combined with a relatively small sample size of approximately 55. For this reason, the results of that study will not be further reported.

Table 1. Relative Frequency of Attribution Choices by Situation Type.

Attributional Category	Situation Type: Interpersonal Failure	Noninterpersonal Failure	Interpersonal Success	Noninterpersonal Success	Overall
Strategy	.20	.21	.14	.16	.18
Ability	.13	.28	.13	.25	.20
Effort	.23	.24	.28	.39	.29
Trait	.04	.01	.06	.01	.03
Mood	.23	.14	.26	.12	.19
External Circumstances	.15	.13	.12	.07	.12

Table 2. Correlations between Forced Choice Attributions and Loneliness by Situation Type (N = 298).

Attributional Category	Situation Type: Interpersonal Failure	Noninterpersonal Failure	Interpersonal Success	Noninterpersonal Success
Strategy	-.169**	-.156*	-.109	-.129
Ability	.452**	.157**	-.147	.089
Effort	-.156*	-.069	-.063	-.135
Trait	.296**	.084	-.091	-.022
Mood	-.121	.024	-.009	.032
External Circumstances	-.124	.027	.348**	.243**

* $p < .01$
** $p < .001$

Table 3 Correlations between Forced Choice Attributions and Depression by Situation Type (N = 304).

Attributional Category	Situation Type: Interpersonal Failure	Noninterpersonal Failure	Interpersonal Success	Noninterpersonal Success
Strategy	-.172**	-.107	-.124	-.109
Ability	.304**	.154*	-.079	-.013
Effort	-.156*	-.111	-.031	.013
Trait	.204**	.115	-.019	-.029
Mood	-.037	.046	-.013	.095
External Circumstances	-.014	-.001	.245**	.093

Table 4. Correlations between Forced Choice Attributions and Loneliness and Depression by Situation Type.

	Situation Type			
	Interpersonal Failure	Noninterpersonal Failure	Interpersonal Success	Noninterpersonal Success
Loneliness (N=117)				
Strategy	-.250**	-.153	-.063	-.059
Ability	.424**	.144	.171	-.079
Effort	-.222*	.019	.223*	.145
Depression (N=121)				
Strategy	-.133	-.118	-.039	-.045
Ability	.372**	.272**	-.029	.027
Effort	-.284**	-.160	.071	.015

* $p < .01$
** $p < .001$